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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,409	01/23/2004	Mohan R. Duggi	2003.08.009.WT0	4530

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EXAMINER	
HOM, SHICK C	
ART UNIT	**PAPER NUMBER**
2616	

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07/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/763,409	DUGGI ET AL.	
	Examiner	Art Unit	
	Shick C. Hom	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2004 and 14 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: in page 20 lines 4-5 which recite "source MANET node 104" is not clear as to whether it is recite ---source MANET node 101--- as in page 20 line 4 because page 20 line 6 recite "destination MANET node 104". Likewise, in Fig. 4 item 435, is not clear as to whether "source MN 104" is reciting --- source MN 101---. Appropriate correction is required.

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the

> invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5 and 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Stanforth et al. (7,151,769).

Regarding claims 1 and 11:

Stanforth et al. disclose a mobile ad hoc network (MANET) including a first node aggregating route cost information associated with a first route from a source node to a destination node (col. 10 lines 10-22 recite routing packet through an ad-hoc radio network (MANET) through intermediate nodes, i.e. first node, between two points, i.e. source and destination nodes, by determining the optimal routing path based on congestion, noise on the links, and class of service, i.e. aggregated route cost information),

said first node comprising a radio frequency RF transceiver and a controller for receiving and sending packets to said RF transceiver, wherein said controller receives a Route Request (RREQ) message from said source node and retrieves initial route cost information from said RREQ message (col. 1 lines 16-67 recite that each node being provided with a transceiver; col. 14

lines 13-36 recite each node, i.e. terminal, comprising computer means, i.e controller, and col. 3 lines 42-64 recite each terminal determines a routing table by means of other terminals for initial route-mapping clearly anticipate the RREQ message)

said initial route cost information comprising RF link cost parameter of preceding RF link between said first node and said source node in said first route; and node cost parameter of preceding node between said first node and said source node in said first route (col. 4 lines 33-61 recite choosing route from source to destination that uses the least amount of energy over the complete route base on the battery status of each terminals and based on class-of-service to be sent clearly anticipate the node cost parameter and link cost parameter, respectively).

Regarding claims 2 and 12:

Stanforth et al. disclose wherein said at least one RF link cost parameter is a zero value and said at least one node cost parameter is a zero value if said first MANET node receives said RREQ message directly from said source MANET node (Fig. 1A and col. 6 lines 4-21 shows and recite the terminals communicating directly with one another).

Regarding claims 3 and 13:

Stanforth et al. disclose wherein said controller stores said initial route cost information retrieved from said RREQ

message in a route table associated with said first MANET node (col. 3 lines 42-64 recite the route table including the initial route map).

Regarding claims 4 and 14:

Stanforth et al. disclose wherein said controller updates said initial route cost information in said RREQ message by adding to said initial route cost information at least one of an RF link cost parameter associated with an RF link to an immediately preceding MANET node between said first MANET node and said source MANET node in said first route; and a first node cost parameter associated with said first MANET node (col. 7 line 62 to col. 8 line 29 recite updating the routing table and transmitting it to the adjacent terminal).

Regarding claims 5 and 15:

Stanforth et al. disclose wherein said controller forwards said RREQ message containing said updated route cost information to a next MANET node between said first MANET node and said destination MANET node in said first route (col. 8 lines 30-38 recite determining and sending the optimal route information to another node-terminal).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 6-10 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanforth et al. (7,151,769) in view of Larsson et al. (2003/0161268).

For claims 6-10 and 16-20, Stanforth et al. disclose the system and method described in paragraph 4 of this office action. Stanforth et al. disclose all the subject matter of the claimed invention with the exception of wherein said controller further receives a Route Reply (RREP) message generated by said destination MANET node and retrieves initial route cost information from said RREP message, said initial route cost information comprising RF link cost parameter of preceding RF link between said first MANET node and said destination MANET node in said first route; and node cost parameter of at least one preceding MANET node between said first MANET node and said destination MANET node in said first route as in claims 6-10 and 16-20.

Larsson et al. from the same or similar fields of endeavor teach that it is known to provide wherein said controller further receives a Route Reply (RREP) message generated by said destination MANET node and retrieves initial route cost information from said RREP message, said initial route cost information comprising RF link cost parameter of preceding RF link between said first MANET node and said destination MANET node in said first route; and node cost parameter of at least one preceding MANET node between said first MANET node and said destination MANET node in said first route (paragraph 0199

recite a RREP message being sent back from the destination node to reserve the resources).

Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide wherein said controller further receives a Route Reply (RREP) message generated by said destination MANET node and retrieves initial route cost information from said RREP message, said initial route cost information comprising RF link cost parameter of preceding RF link between said first MANET node and said destination MANET node in said first route; and node cost parameter of at least one preceding MANET node between said first MANET node and said destination MANET node in said first route as taught by Larrson et al. in the communications network and method of Stanforth et al.

The controller further receiving a Route Reply (RREP) message generated by said destination MANET node and retrieves initial route cost information from said RREP message, said initial route cost information comprising RF link cost parameter of preceding RF link between said first MANET node and said destination MANET node in said first route; and node cost parameter of at least one preceding MANET node between said first MANET node and said destination MANET node in said first route can be implemented by providing the means and method of

generating and transmitting the RREP message of Larsson et al. in the destination MANET node of Stanforth et al.

The motivation for providing the means and method of generating and transmitting the RREP message as taught by Larsson et al. in the communication network and method of Stanforth et al. being that it provides more efficiency for the system since the system can reserve resources and better provide an optimal path to the destination node.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
Gutierrez et al. disclose an ad-hoc network and method of routing communications in a communication network.
Naghian discloses signal propagation delay routing.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C. Hom whose telephone number is 571-272-3173. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pham Chi can be reached on 571-272-3179. The fax phone number for the organization

where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SH SH

CHI PHAM
SUPERVISORY PATENT EXAMINER 7/5/07